CLAIMS

1. (Amended) An inverter device comprising:

an output-voltage calculating unit that calculates a plurality of output voltage command values in which amplitudes are the same as each other but only phase advances under a fixed condition, based on a frequency command value for driving a motor and a state quantity of the motor, in each calculation period;

a PWM-pattern generating unit that is a semiconductor integrated circuit that includes

a unit that temporarily stores each of the plurality of output-voltage command values output by the output-voltage calculating unit,

a unit that reflects the plurality of output-voltage command values stored, in a triangular wave signal in time-series order, and

a unit that outputs a PWM signal based on the result of the reflection; and

a switching unit that switches a direct voltage according to the PWM signal output by the PWM-pattern generating unit and supplies an alternating voltage with a predetermined frequency to the induction motor.

2. (Amended) An inverter device comprising:

an output-voltage calculating unit that calculates a plurality of output voltage command values when a phase change amount exceeds a predetermined value, and calculates one output-voltage command value when a phase change amount does not exceed the predetermined value, based on a frequency command value for driving a motor and a state quantity of the motor, in each calculation period;

a PWM-pattern generating unit that outputs a PWM signal according to an output-voltage command value output

by the output-voltage calculating unit; and

a switching unit that switches a direct voltage according to the PWM signal output by the PWM-pattern generating unit and supplies an alternating voltage with a predetermined frequency to the induction motor.

3. (Amended) The inverter device according to claim 1, wherein

when the plurality of output-voltage command values are to be calculated and if the frequency command value is greater than a predetermined value,

the output-voltage calculating unit calculates a larger number of output-voltage command values than a case of being smaller than the predetermined value.

4. (Amended) The inverter device according to claim 1, wherein

the output-voltage calculating unit calculates the plurality of output-voltage command values when the frequency command value is greater than a predetermined value, and calculates one output-voltage command value when it is smaller than the predetermined value.

5. (Amended) The inverter device according to claim 2, wherein

when the plurality of output-voltage command values are to be calculated and if the frequency command value is greater than a predetermined value,

the output-voltage calculating unit calculates a larger number of output-voltage command values than a case of being smaller than the predetermined value.

6. (Added) The inverter device according to claim 2,

wherein

the output-voltage calculating unit calculates the plurality of output-voltage command values when the frequency command value is greater than a predetermined value, and calculates one output-voltage command value when it is smaller than the predetermined value.